



Heather Shirley Smith
Deputy General Counsel

Duke Energy
40 W. Broad Street
Suite 690
Greenville, SC 29601

o: 864.370.5045
f: 864.370.5183

heather.smith@duke-energy.com

April 15, 2021

VIA ELECTRONIC FILING

The Honorable Jocelyn G. Boyd
Chief Clerk and Executive Director
Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, SC 29210

Re: Joint Petition of Duke Energy Carolinas, LLC and Duke Energy Progress, LLC to Establish a Consolidated Informational Docket for Review and Consideration of Grid Improvement Plans (NDI Opened Pursuant to Commission Order No. 2020-533) Docket No. ND-2020-28-E

Dear Ms. Boyd:

On August 12, 2020, by Order 2020-533 in Docket No. 2019-381-E, the Commission approved Duke Energy Carolinas, LLC's ("DEC") and Duke Energy Progress, LLC's ("DEP") (collectively, the "Companies") joint request to establish an informational docket for review and consideration of its Grid Improvement Plan ("GIP"). As a result of that order, on August 14, 2020, the Commission opened the above-referenced NDI docket.

On September 12, 2020, the Companies filed key GIP documents in this docket to provide any interested parties with background on the GIP. On December 2, 2020, the Companies held a Grid Improvement Plan virtual forum. During this forum, subject matter experts discussed 2019 program spending compared to target as submitted in the 2019 SC GIP Status Report and were available for additional questions.

The Companies hereby provide an update on progress on the GIP for the calendar year 2020. The attached 2020 GIP Status Report for DEC and DEP shows how the Companies are performing in terms of program costs and units as compared to its targets.

The Companies are proud of the continued progress made during 2020, despite challenges the pandemic presented. Investments in Self-Optimizing Grid and Targeted Undergrounding continue to prevent thousands of outages for customers in South Carolina. Through December 31, 2020, DEC has avoided 17.0 million customer minutes of interruption due to the operation of its self-healing networks. Through December 31, 2020, DEP has avoided 13.7 million customer minutes of interruption due to the operation of its self-healing networks. DEC completed projects in Greenville and Spartanburg counties and 4.89 miles in its Targeted Undergrounding program.

DEP completed projects in Darlington, Florence, Marion, Sumter and Williamsburg Counties and 2.95 miles in its Targeted Undergrounding program.

The Companies are planning another stakeholder meeting to occur on May 12, 2021 to share and discuss the 2020 results being filed today. The Companies will continue to inform stakeholders, the ORS and the Commission on developments in the Companies' GIPs.

Sincerely,



Heather Shirley Smith

Attachments

cc via email w/ enclosure:

Counsel for Office of Regulatory Staff
Department of Consumer Affairs
Counsel for Sierra Club
Counsel for Walmart, Inc.
Counsel for SELC on behalf of SC NAACP, SCCCL & Upstate Forever
Counsel for Nucor Steel-South Carolina
Counsel for SCSBA and Cypress Creek Renewables
Counsel for SCEUC
Counsel for Vote Solar
Counsel for CMC Recycling
Hasala Dharmawardena

South Carolina Grid Improvement Plan Report
Duke Energy Carolinas
Capital Expenditures 2019 and 2020

Program	Cumulative Target	Units	Cumulative Actuals	Units	Cumulative Variance	Units	Program Notes
1 Self Optimizing Grid	42,818,000		29,213,624		(13,604,376)		
Segmentation and Automation	12,726,000	203	10,505,821	221	(2,220,179)	18	Program continues to execute at less than anticipated cost.
Modular Distrib Control Device POC	43,000		587		(42,413)		Program continues to be delayed but anticipates work in 2021.
Capacity & Connectivity	11,835,000	29	7,630,450	22.7	(4,204,550)	(6)	Program executed less scope due to labor resources being diverted for storm efforts and solar expansions.
Substation Bank Capacity	12,536,000		4,971,960		(7,564,040)		Program continues to require less substation capacity work to support self-optimizing grid.
Advanced DMS	5,678,000		6,104,806		426,806		Program continues to execute as anticipated.
2 Distribution Hardening & Resiliency - Flood	-		-		-		
3 Distribution Transformer Retrofit	-		-		-		
4 Integrated Volt/Var Control	15,195,000		6,017,380		(9,177,620)		
Circuits		107		7		(100)	Program was delayed for additional planning and design, but significant work was completed including upgrading regulator controls and installing capacitor banks.
Substations		15		-		(15)	Program was delayed for additional planning and design, but significant work completed on civil construction, control house panel installation and telecom installations.
5 Transmission Hardening & Resiliency	15,790,000		9,625,518		(6,164,482)		Program largely focused on 44kV line rebuilds. Less scope executed due to timeline and complexity associated with land acquisition and permitting of rights-of-way.
6 Transmission Bank Replacement	4,812,500		2,854,605		(1,957,895)		Program scope in 2020 reduced due to engineering and development resource constraints.
7 Transmission System Intelligence	9,095,625		5,010,641		(4,084,984)		Program scope in 2020 reduced due to work being completed outside of the GIP program.
8 Oil Breaker Replacement	3,831,000		4,449,136		618,136		Program continues to execute as anticipated.
9 Targeted Undergrounding	12,705,000	26	13,519,658	11.9	814,658	(14)	Unit cost continues to be greater than estimated resulting in fewer miles being executed.
10 Long Duration Interruptions	12,967,000		6,566,622		(6,400,378)		Some 2020 scope removed due to inability to obtain right-of-way. Anticipate recovery to plan in 2021.
11 Enterprise Communications	14,986,548		18,653,034		3,666,486		
Next Generation Cellular	727,349	943	1,159,020	831	431,671	(112)	Program costs are greater than anticipated.
Mission Critical Voice	2,690,932		479,366		(2,211,566)		Program delayed for additional planning and design.
BizWAN	40,073		280,883		240,810		2020 program included more scope than anticipated to provide additional functionality.
GridWAN	1,930,305	30	2,282,840	45	352,535	15	2020 program continued to execute ahead of schedule.
Mission Critical Transport	6,172,857	30	10,605,440	66	4,432,583	36	2020 program continued to execute ahead of schedule.
Towers Shelters Power Support	2,096,326	4	2,939,285	5	842,959	1	2020 program continued to execute ahead of schedule.
Network Asset System Tools	62,660		53,735		(8,925)		Project is executing as anticipated.
Vehicle Area Network	1,266,046	2,979	852,464	806	(413,582)	(2,173)	Program contained less scope than anticipated.
12 Distribution Automation	11,112,000		16,484,166		5,372,166		
Hydraulic to Electric Recloser	7,772,000	118	5,851,855	121	(1,920,145)	3	Program is executing at less than anticipated cost.
System Intelligence & Monitoring	800,000		15,823		(784,177)		Project continues to be delayed for additional scoping and design but anticipates work in 2021.
Fuse Replacement w/ Reclosers	1,000,000	200	495,180	29	(504,820)	(171)	Program delayed due to materials availability due to pandemic.
Underground System Automation	1,540,000		10,121,308		8,581,308		Program scope increased to include fiber network for switchgear relays for SCADA and self-healing capabilities.
13 Enterprise Applications	3,481,000		1,953,309		(1,527,691)		2020 program contained less scope than anticipated.
14 Integrated System Operations Planning	3,194,000		797,397		(2,396,603)		Program is executing at less than anticipated cost.
15 DER Dispatch Enterprise Tool	1,386,000		-		(1,386,000)		Program delayed for additional planning and design and to ensure alignment with new ADMS functionalities.
16 Power Electronics for Volt/Var	271,000		-		(271,000)		Program anticipated to start in 2021.
17 Physical and Cyber Security - Transmission	20,982,500		26,618,617		5,636,117		Program continues to execute ahead of schedule.
18 Physical and Cyber Security - Distribution	5,399,887		1,522,247		(3,877,640)		
Device Entry Alert System	187,098		54,376		(132,722)		Program removed from plan to prioritize work that provides more risk reduction.
Secure Access Device Management	740,049		689,707		(50,342)		Program is executing as anticipated.
Line Device Protection	4,472,740	111	778,164	43	(3,694,576)	(68)	2020 program contained less scope than anticipated and will complete in 2021.
Distribution Total	123,515,435		94,727,437		(28,787,998)		
Transmission Total	54,511,625		48,558,517		(5,953,108)		
Total Grid Improvement Plan	178,027,060		143,285,954		(34,741,106)		

Notes:

1. The IVVC program installed 98 regulator controls. The Communications Mission Critical Transport program installed 40 miles of fiber and 26 microwave sites. The Tower Shelter Power Supplies program installed 5 tower/shelter sites and 18 power supply sites.
2. The GIP deferral does not include Energy Storage and Electric Vehicle scope that was included in the original Grid Improvement Plan.

South Carolina Grid Improvement Plan Report
Duke Energy Progress
Capital Expenditures 2019 and 2020

Program	Cumulative Target	Units	Cumulative Actuals	Units	Cumulative Variance	Units	Program Notes
1 Self Optimizing Grid	12,975,962		16,782,696		3,806,734		
Segmentation and Automation	3,860,962	64	6,527,503	112	2,666,541	48	Program is executing ahead of schedule.
Capacity & Connectivity	3,535,000	14	7,013,114	33.6	3,478,114	20	Program is executing ahead of schedule.
Substation Bank Capacity	3,744,000		2,841		(3,741,159)		Program continues to require less substation capacity work to support self-optimizing grid.
Advanced DMS	1,836,000		3,239,239		1,403,239		Program includes more scope than was in the plan and which provides additional functionality.
2 Distribution Hardening & Resiliency - Flood	-		-		-		
3 Distribution Transformer Retrofit	10,996,000	9,163	10,783,911	9,159	(212,089)	(4)	Project is executing as anticipated.
4 Distributed System Demand Response	1,000,000		-		(1,000,000)		Program has not yet started, pending coordination with NC system.
5 Transmission Hardening & Resiliency	3,350,000		1,211,580		(2,138,420)		Several 2020 line rebuild projects were removed from scope.
6 Transmission Bank Replacement	1,437,500		682,626		(754,874)		Program scope in 2020 reduced due to engineering and development resource constraints.
7 Transmission System Intelligence	2,314,375		1,873,934		(440,441)		Project is executing as anticipated.
8 Oil Breaker Replacement	684,000		5,615,951		4,931,951		Program accelerated scope in 2020 to leverage resource availability and accelerate reliability benefits.
9 Targeted Undergrounding	3,795,000	9	5,562,547	4.3	1,767,547	(5)	Unit cost continues to be greater than estimated resulting in fewer miles being executed.
10 Long Duration Interruptions	3,873,000		14,031,921		10,158,921		Program experienced challenging storm and flood conditions while also executing more scope than anticipated due to accelerating schedule to provide significant customer reliability improvements.
11 Enterprise Communications	10,359,669		5,163,494		(5,196,175)		
Next Generation Cellular	340,002	359	260,371	484	(79,631)	125	Program is executing at less than anticipated cost.
Mission Critical Voice	1,829,849		576,089		(1,253,760)		2020 program delayed for additional planning and design.
BizWAN	46,748		35,211		(11,537)		Program is executing as anticipated.
GridWAN	2,627,437	16	1,280,884	31	(1,346,553)	15	Program continues to execute at less than anticipated cost.
Mission Critical Transport	2,994,583	17	1,808,262	18	(1,186,321)	1	2020 program is executing at less than anticipated cost.
Towers Shelters Power Support	2,144,612	2	972,736	-	(1,171,876)	(2)	Program contained less scope than anticipated.
Network Asset System Tools	44,878		18,081		(26,797)		2020 program delayed for additional planning and design.
Vehicle Area Network	331,560	783	211,860	240	(119,700)	(543)	Program phase one complete, moving into phase two planning.
12 Distribution Automation	3,559,000		1,548,650		(2,010,350)		
Hydraulic to Electric Recloser	2,443,000	39	1,214,040	29	(1,228,960)	(10)	Program delayed due to materials availability due to pandemic.
System Intelligence & Monitoring	196,000		-		(196,000)		Project continues to be delayed for additional scoping and design but anticipates work in 2021.
Fuse Replacement w/ Reclosers	460,000	92	334,610	35	(125,390)	(57)	Program delayed due to materials availability due to pandemic.
Underground System Automation	460,000		-		(460,000)		Project scope was removed from the Grid Improvement Plan.
13 Enterprise Applications	1,283,200		559,784		(723,416)		2020 program contained less scope than anticipated.
14 Integrated System Operations Planning	955,000		222,746		(732,254)		Program is executing at less than anticipated cost.
15 DER Dispatch Enterprise Tool	414,000		-		(414,000)		Program delayed for additional planning and design and to ensure alignment with new ADMS functionalities.
16 Power Electronics for Volt/Var	157,000		-		(157,000)		Program anticipated to start in 2021.
17 Physical and Cyber Security - Transmission	11,267,500		2,248,071		(9,019,429)		Program scope in 2020 reduced due to development constraints and other non-GIP reliability work taking precedence.
18 Physical and Cyber Security - Distribution	1,659,576		918,796		(740,780)		
Device Entry Alert System	67,051		15,246		(51,805)		Program removed from plan to prioritize work that provides more risk reduction.
Secure Access Device Management	256,512		226,296		(30,216)		Program is executing as anticipated.
Line Device Protection	1,336,013	320	677,255	262	(658,758)	(58)	2020 program contained less scope than anticipated and will complete in 2021.
Distribution Total	51,027,407		55,574,546		4,547,139		
Transmission Total	19,053,375		11,632,161		(7,421,214)		
Total Grid Improvement Plan	70,080,782		67,206,707		(2,874,075)		

Notes:
1. The Communications Mission Critical Transport program installed 13 miles of fiber and 5 microwave sites. The Tower Shelter Power Supplies program installed 2 power supply sites.
2. The GIP deferral does not include Energy Storage and Electric Vehicle scope that was included in the original Grid Improvement Plan.

ELECTRONICALLY FILED - 2024 April 15 2:25 PM ANS GSP SJD Dkt 2023-388-E Page 4 of 4